SECTION 01200

TECHNICAL PROVISIONS

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SECTION 01200

TECHNICAL PROVISIONS

1. WORK COVERED BY CONTRACT PRICE:

1.1 DESCRIPTION OF WORK

1.1.1 The **maintenance dredging** to be done under these specifications will be performed in the **Shinnecock and Moriches Inlet Federal Navigation Channels** with placement of dredged sand from Shinnecock Inlet 7,000 - 10,000 feet west of the western jetty at Shinnecock Inlet (Basic Schedules A and B) as shown on the contract drawings and either 0-2,500 feet west of the western jetty at Moriches Inlet (Basic Schedule A – Option 2 – Item 0003AB) or 30,050-32,550 feet west of the west jetty at Moriches Inlet (Basic Schedule B - Option 2 – Item 0006AB) as shown on the contract drawings.

1.1.2 The **beach nourishment** to be done under these specifications under Basic Schedules A and B – Option 1 will be the dredging of the **Shinnecock Inlet Borrow Area** with placement of the dredged sand along the shoreline up to 4,000 feet west of the western jetty at Shinnecock Inlet as shown on the contract drawings.

1.1.3 The work to be done consists of furnishing all plant, labor, materials and equipment in order to perform all dredging and hydraulic placement in strict accordance with the specifications and drawings. The Shinnecock Inlet and Moriches Inlet Navigation Channels and the Shinnecock Inlet Borrow Area are to be dredged within the limits and to the lines, grades, and depths indicated on the contract drawings.

1.1.4 Dredged material to be placed 0 - 4,000 feet west of the western jetty at Shinnecock under Basic Schedules A and B – Option 1 shall be obtained from the **Shinnecock Inlet Borrow Area** as detailed in the contract drawings. This dredging area shall be dredged to a depth of **no greater than 10 feet below existing grade and have gradual 1V:5H side slopes and a uniform bottom elevation free of mounds or holes when completed** unless waived by the Contracting officer or Contracting Officer

Representative.

1.1.5 Dredged material to be placed 7,000 – 10,000 feet west of the western jetty at Shinnecock Inlet under Basic Schedules A and B – Item 2 shall be obtained from the **Shinnecock Inlet Navigation Channel** as detailed in the contract drawings to uniform depths of not less than 20 feet below Mean Low Water with a 2 feet allowable overdepth. This dredging area shall be dredged to a depth of no greater than 22 feet below Mean Low Water unless waived by the Contracting officer or Contracting Officer Representative.

1.1.6 Dredged material to be placed either 0-2,500 feet west of the western jetty at Moriches Inlet (Basic Schedule A – Option 2 – Item 0003AB) or 30,050 – 32,550 feet west of the western jetty at Moriches Inlet (Basic Schedule B – Option 2 – Item 0006AB) shall be obtained from the **Moriches Inlet Navigation Channel** as detailed in the contract drawings to uniform depths of not less than 14 feet below Mean Low Water with a 2 feet allowable overdepth. This dredging area shall be dredged to a depth of **no greater than 16 feet** below Mean Low Water unless waived by the Contracting officer or Contracting Officer Representative

1.1.7 The limits of the dredging areas of **Moriches Inlet, Shinnecock Inlet and the Shinnecock Inlet Borrow Area** are shown on the contract drawings. Shinnecock Inlet, Moriches Inlet and the Shinnecock Inlet borrow area will be surveyed by the Corps of Engineers prior to commencement of dredging.

1.1.8 Beach fill schedule for placement between 0 and 4,000 feet west of the west jetty at Shinnecock Inlet (Basic Schedule A or B – Option 1 : The beach fill 0 - 4,000 feet west of Shinnecock Inlet shall consist of one (1) berm. The berm width varies in size and will extend at it's widest a maximum of 140 feet seaward from the reference line shown on the contract drawings at an elevation of +9.5 feet NGVD. A seaward slope of 1 on 15 will extend to the ocean bottom. For Basic Schedules A or B – Option 1 only, the existing dune system is to be enhanced by adding to the existing dune a new dune seaward of the of the existing dune system with a 25 feet crest width at an elevation +15.0 feet NGVD, which diminishes at the western transition to tie into the existing dune system. Side slopes of 1 on 5 on both sides of the dune will extend to the existing ground elevation. After enhancement of the dune system, beach grass (Basic Schedule A or B – Option 1) shall be planted on the created dune system as described in Section 02481 Beach Grass.

1.1.9 Beach fill schedule for placement between 7,000 and 10,000 feet west of the west jetty at Shinnecock Inlet (Basic Schedules A or B): The beach fill 7,000 – 10,000 feet west of Shinnecock Inlet shall consist of one (1) berm. The berm will extend a maximum of 200 feet seaward from the elevation of +2.0 feet NGVD. A seaward slope of 1 on 15 will extend to the ocean bottom.

1.1.10 Beach fill schedule for placement between 0 and 2,500 feet west of the west jetty at Moriches Inlet (Basic Schedules A - Option 2 – Item 0003AB) and 30,050 – 32,550 feet west of the western jetty at Moriches Inlet (Basic Schedule B – Option 2 – Item 0006AB) : The beach fill 30,050 – 32,550 feet west of Moriches Inlet shall consist of one (1) berm. The berm will extend a maximum of 200 feet seaward from the elevation of +2.0 feet NGVD. A seaward slope of 1 on 15 will extend to the ocean bottom.

1.1.11 Creation of Environmental Pool (Basic Schedule A or B – Option 1 **:** After completion of the beach fill (Basic Schedule A or B – Option 1), the environmental pools shown on the plans shall be created. Any material excavated during the creation of the environmental features shall be placed below the +2’ NGVD elevation.

1.1.12 Construct Sand Fencing (Basic Schedule A or B – Option 1): Sand fencing shall be erected at the location and in the manner shown on the project plans in accordance with Section 02714 Sand Fence in the specifications.

1.2 Mobilization and Demobilization (Basic Schedules A - Items 0001AA, 0002AA and 0003AA or Schedule B – Items 0004AA, 0005AA and 0006AA)**:**

1.2.1 Mobilization shall include all costs for operations accomplished prior to commencement of actual dredging operations, such as, transfer of the dredge and attendant plant and equipment to the site, initial installation of pipe, preparation of placement areas, preparation of required project signs (Section 00900), and/or incidentals in advance of this actual dredging. Demobilization shall include general preparation for transfer of plant to its home base, removal of pipelines, cleanup of spoil areas, and the transfer of plant to its home base. All costs connected with the mobilization and demobilization of all of the contractor’s dredging plant and equipment will be paid for at the contract lump sum price for

this item. Sixty percent (60%) of the lump sum price will be paid to the Contractor upon completion of his mobilization to the work site. The remaining forty percent (40%) will be included in the final payment for work under the contract. The cost of work other than mobilization and demobilization of the Contractor's dredging plant and equipment shall not be included in this item.

1.2.2 In the event the Contracting Officer and/or his Representative considers that the amount in this item (60%), which represents mobilization, does not bear a reasonable relation to the cost of the work in this contract, the Contracting Officer and/or his Representative may require the Contractor to justify this portion of the bid. Failure to justify such price to the satisfaction of the Contracting Officer and/or his Representative will result in payment of actual mobilization costs as determined by the Contracting Officer and/or his Representative, at the completion of mobilization and payment of the remainder of this item in the final payment under this contract. The determination of the Contracting Officer and/or his Representative is not subject to appeal.

1.3 Removal and Placement of Material: The unit price per cubic yard for dredging shall include the cost of removal and placement of all materials as specified herein or indicated on the drawings, with the exception of ledge rock, large boulders, large rock fragments, wrecks, snags, stumps, and piles which cannot be removed or buried below project depth without blasting. Should ledge rock or other material which cannot be removed without blasting be encountered, the Contractor shall remove all overlying material which in the judgement of the Contracting Officer and/or his Representative can be removed and report the location. Nothing in this paragraph shall be construed as prohibiting the removal of excepted material by special means at prices agreed upon and approved in accordance with Contract Clause entitled: “DIFFERING SITE CONDITIONS” (FAR 52.236-2).

2. ORDER OF WORK:

The **Shinnecock Inlet Navigation Channel** outlined by the coordinates indicated on the contract drawing shall be the first area dredged. Once the channel has been dredged and accepted, the contractor will be permitted to dredge the **Shinnecock Inlet Borrow Area** (if Option 1 of either schedule

is exercised) as outlined by the coordinates indicated on the contract drawing. Dredging of **Moriches Inlet** (if Option 2 of either schedule is exercised) will be permitted only after all the dredging of the **Shinnecock Inlet** (either basic schedule award) **and Shinnecock Inlet Borrow Area** (Option 1 of either schedule is exercised) has been accomplished.

3. CHARACTER OF MATERIALS:

3.1 Results of grain size analyses performed on samples collected in the vicinity of the project area(s) have indicated that the material to be deposited is predominantly sand (greater than 90% sand) and therefore compatible for beach placement.

3.2 Bidders are expected to examine the site of the work and decide for themselves the character of the materials prior to submitting their bids. Records of previous dredging operations are available at the U.S. Army Engineer District, New York, Operations Division, Support Branch, Technical Support Section, Room 1937, 26 Federal Plaza, New York, N.Y. 10278-0090.

4. SITE CONDITIONS: Bidders are expected to examine the site of the work, including the placement areas and decide for themselves the conditions affecting their operations prior to submitting their bids. See Contract Clause entitled: “SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK” (FAR 52.236-3).

5. SEDIMENTATION PERMITS: No local governmental sedimentation or erosion control permits are required for this work except that as required in accordance with Contract Clause entitled: “PERMITS AND RESPONSIBILITIES” (FAR 52.236-7).

6. SUBMITTALS: The Contractor shall submit for approval, by the Contracting Officer and/or his Representative, his plan for development of any contractor furnished placement areas or any modification to the Government furnished placement area. This plan shall show areas or portions thereof to be used. The plan shall also show the manner in which the dredged material will be distributed in the areas. Such plans shall be provided by the contractor at the Preconstruction Conference (Section 00800 H-35).
If the plan is not accepted the Contractor is to perform the work in accordance with the specifications. In addition, the Contractor shall prepare a pre-dredging plan for the borrow area (Schedule A or B – Option 1) for acceptance at the Preconstruction Conference, if it is awarded.

7. PLANT: The Contractor agrees to keep on the job sufficient plant to meet the requirements of the work. The plant shall be in a satisfactory operating condition and capable of safely and efficiently performing the work as set forth in the specifications. The plant shall be subject to the inspection of the Contracting Officer and/or his Representative at all times. No reduction in the capacity of the plant employed on the work shall be made except by written permission of the Contracting Officer and/or his Representative. The measure of the "capacity of the plant" shall be its actual performance on the work to which these specifications apply.

7.1.1 Scows: All scows must be kept in good condition, the coamings repaired and the pockets provided with proper doors or appliances to prevent leakage of material.

7.1.2 Hydraulic Pipelines: All pipelines for hydraulic dredging Plant must be kept in good condition at all times and any leaks or breaks along their length shall be promptly repaired. All breaks in any pipeline shall be reported on the Contractor's Daily Quality Control Report for the date the break occurred. An estimation of the duration of the break and the quantity of misplaced material shall be provided in the report.

7.1.3 Marking of Floating Dredge Pipelines: The contractor shall be required to mark floating dredge pipelines in accordance with the requirements of 88.15 of Annex V of U.S. Navigation Rules, inland, COMDTINST M 16672.2A, dated 23 December 1983. Dredge pipelines that are floating or supported on trestles shall display one row of yellow lights, visible all around the horizon for at least 2 miles on a clear, dark night. The lights shall flash at 50 or 70 times per minute and be places not less than 1 and not more than 3-5 meters (9.8 – 16 feet) above the water. The lights shall be sufficient in number to clearly show the length and course of the pipeline.

7.1.4 Dredge Pipelines Crossing Navigable Channels: The arrangement of any pipeline crossing a navigable channel shall be approved by the Contracting Officer. Where the pipeline crosses a navigable channel the spacing of the lights shall not be more than 10 meters (33 feet) apart. Two red lights, visible all around the horizon for at least 2 miles on a clear, dark night, shall be displayed at each end of the pipeline, including the ends in a channel where the pipeline is separated to allow vessels to pass (whether open or closed). The lights shall be

one meter (3.3 feet)apart in a vertical line with the lower light at the same height above the water as the flashing yellow light.

7.1.5 Submerged Pipelines: Any discharge pipeline submerged to cross a navigation channel shall be submerged so that sufficient depth for navigation exists. Such discharge pipeline shall be marked by signs, lights or other devices to insure safety to navigation by day and by night. All of these devices shall be in complete accordance with Coast Guard regulations.

7.1.6 Road Crossings: A detailed plan of the pipeline route to be used by the Contractor shall be submitted prior to laying of the pipeline. A ramp over any discharge pipeline crossing any roadways at the project site(s) shall be provided. Additionally, adequate signs (caution and stop, if necessary), and flashing warning lights, shall be provided by the contractor to ensure safety to vehicles and their occupants using the roadway. Under no circumstances shall any portion of the paved portion of any roadway be disturbed. If the roadway is disturbed, the Contractor shall provide an adequate base to allow traffic to pass over the pipeline, and repairs to the roadway after completion of the project area, such that the roadway is restored to a condition equal to or better than the condition prior to disturbance. In addition, prior to placement of the pipeline across any roadway, the Contractor shall contact personnel at the appropriate municipality to determine if the warning signs and lights are adequate for safety purposes.

7.1.1 Crossing of West Jetty at Shinnecock Inlet: Due to ongoing rehabilitation of the existing western jetty at Shinnecock Inlet, no pipeline will be allowed to cross over the jetty during operations.

8. PLACEMENT OF DREDGED MATERIAL:

8.1 The material to be dredged, exclusive of all floatable material, shall be placed as specified in the contract drawings. The material shall be deposited evenly to form a comparatively smooth and uniform beach surface in accordance with the contract drawings. In the event that the amount of material available is not sufficient to construct the required berm width, the Contracting Officer or the Contracting officer Representative (COR) may adjust the required width. If the placement area has been completed to the specifications prescribed in the contract drawings and additional material remains in the borrow areas

(Shinnecock Inlet and Moriches Inlet channels) to reach the required depths as stated above in paragraph 1.1 "Work Covered by Contract Price," removal and placement of the additional material may be directed by the Contracting Officer or COR.

8.2 Dredge material shall be pumped directly from the dredging vessel to the beach placement area. No bottom placement and re-handling will be allowed. Dredge discharge shall be manipulated and controlled by the Contractor in such a manner that a minimum of shaping by mechanical equipment will be required and a minimum amount of material will be lost.

8.3 All floatable material excavated, including, without limitation, wood and tires, shall be disposed of at an existing approved upland disposal area. Should the Contractor encounter floatable material, a copy of a letter granting the permission of appropriate authorities to use an existing approved upland disposal area shall be submitted to the Contracting Officer and/or his representative.

8.4 Any material that is deposited in areas not specified in the contract drawings will be removed and deposited at a location designated by the Contracting Officer or his representative at no additional expense to the Government.

a. **Placement of dredged material shall be subject to the following conditions**:

   1) The material placed shall be free of debris.

   2) Any material that is placed elsewhere than in locations designated or approved by the contracting officer’s representative will not be paid for and the contractor may be required to remove such material, and place it where directed, at his expense.

   3) Any discharge pipeline crossing navigation channels must be submerged so that sufficient depth for navigation exists.

   4) Such discharge pipeline must be marked by sign, lights or other devices to insure safety to navigation by day and by night. All of these devices shall be in complete accordance with Coast Guard regulations. **The contractor shall provide a written discussion of pipeline markings in the Accident Prevention Plan (Section 00800 S-3).**

5) The discharge pipeline shall be arranged as approved by the Contracting Officer or his representative.

6) The Contractor shall be solely responsible for any damage caused by him to dunes, buildings, pavement, curbs, signs, lawns, fencing, bulkheads, beach grass, or any other property adjacent to the placement areas, and shall be required to repair at his own expense any such damage caused during the performance of work under this contract. Prior to the commencement of operations and after completion thereof, a joint inspection by representatives of the contractor, the Contracting Officer and local interests pertaining to the above will be made.

7) If Option 1 of either Basic Schedule A or B, the beach nourishment work is awarded, the Contractor may be directed to move to another location within the Borrow Area if undesirable material begins to be pumped onto the beach (ie. silt).

8) The area where filling operations are in progress, shall be floodlighted during the hours of darkness. Illumination shall be provided by using portable light equipment such as model No.LDA I6 MTVE manufactured by ALLMAND BROS. INC. of HOLDREIRE, or approved equal. A minimum of 3 foot candles of illumination shall be maintained in the immediate vicinity of the pipe discharge.

9) Monitoring the discharge operation by radio communication from the discharge location to the leverman during all pumping operations is required.

10) A diffuser must be used when discharging material onto the placement area.

11) Debris from the sand fill material shall be removed and disposed of as directed.

12) For Option 1 of either Basic Schedule A or B is exercised, the final beach berm of placed fill shall be shaped above elevation +4.0 feet NGVD by bulldozing or other approved means as required to provide the design beach section shown on the drawings. No reshaping of the existing beach which is above the lines and grades of the

design section will be permitted.

13) For Option 1 of either Basic Schedule or B, if the design template cannot be achieved at the toe of the section, then an extended berm widths to offset voids in the construction fill template will be allowed. Such excess material shall be placed below elevation +4.0 feet above the toe and the payable quantity shall not exceed the deficiency in the template volume plus tolerance.

13) A fill section will not be accepted for final survey unless the section is graded and dressed so as to eliminate any undrained pockets, abrupt lumps, and depressions in the beach fill surface.

14) For Option 1 of either Basic Schedule A or B,a tolerance of +1 foot measured vertically will be allowed and paid for n material placed above the required grades as shown on the contract drawings.

15) It is intended that dredge discharge shall be manipulated and controlled by the Contractor in such a manner that a minimum of shaping by mechanical equipment will be required and a minimum amount of material will be lost.

16) It is expected that in placing the sand fill hydraulically, most of the silt and other fines being pumped will be washed into the ocean and dissipated by wave action. Ponding of the dredge effluent will not be allowed. However, baffles or dikes to control the flow of the dredge effluent will be allowed. The final seaward slope of the sand fill to be placed below elevation +4.0 feet shall be the uncontrolled hydraulic slope of the material placed by the dredging process, estimated to be a 1 vertical to 15 horizontal slope to ocean bottom. The dredge effluent shall return directly to the ocean and not to the inshore side of the fill.

17) A temporary dike shall be constructed at the inshore limit of the fill to prevent the dredging effluent from extending beyond the contract limits.

18) During all pumping operations, the Contractor shall provide personnel to maintain visual control of the end of

the discharge line. Radio contact shall also be provided by the Contractor to enable such personnel to halt dredging in case of emergencies or undesirable material placement as directed by the COE.

a. QUALITY CONTROL: The Contractor shall establish and maintain quality control for material placement to assure compliance with contract requirements, and maintain records of his quality control for all construction operations, including but not limited to the following:

   1) Dredging, including suitability of dredged material and manipulation and control of the dredge discharge.

   2) Placement of sand fill material, including continuity and order of placement; distribution of material and measures used to control loss of material.

b. The Contractor will have a "NOTICE TO MARINERS" published by the Coast Guard 15 days prior to start of work.

c. Disposal Plan: **The Contractor shall submit for approval his disposal plan at the Preconstruction Conference (Section 00800 36).** The disposal plan shall include the particular site(s) to be utilized, all special conditions (i.e., NYSDEC, etc.) specific to sites(s) being used, contractor access to the site(s) locations and cross-section of existing and proposed dikes, maximum elevations and quantities of disposal material for each site, weir and drainage structure locations, manner in which the dredged material will be distributed in the areas, beach planting scheme, etc. Approval of the disposal plan by the Contracting Officer or his representative is required prior to disposal site(s) preparation. *The Contractor shall conduct his work in accordance with the Disposal Plan, however, approval of the plan for development of the disposal area does not in any manner relieve the Contractor of his responsibility for the adequacy of the design and construction and drainage facilities required.* In addition, the Contractor shall also submit at the pre-construction meeting, his plan for road crossings of the discharge pipeline. The contractor shall be responsible for securing the appropriate permits for any road crossings of discharge pipeline or similar activities and may not begin

work until such permits are received from the appropriate agencies.

d. Pre-Construction Site Visit: Prior to actual construction of any placement site, the Contractor and the Contracting Officer and/or his representatives shall visit the site(s) for the purpose of delineating areas of access avoidance (cultural resource and/or wetland concerns).

e. Construction/Maintenance of Containment Structure. The Contractor shall construct all retaining dikes, waste weirs and drainage structures as are necessary for confining the dredged material and for controlling disposal area effluent until acceptance of all work under the contract.

f. Protection of Structures and Adjacent Areas. The contractor shall be responsible for the maintenance, repair and stability of all dikes, roads and structures, used by him under the contract. The Contractor shall restore all dikes, roads, and areas he disturbs through his operations to a satisfactory condition, as approved by the Contracting Officer or his representative, at no additional cost to the Government.

g. Inspection of Structures and Adjacent Areas. The Contractor shall inspect all dikes, roads, waste weirs, and adjacent areas utilized during this operation on a daily basis to assure their safety and stability. The Contractor shall include these inspections in his daily quality control report. The inspection shall include but not be limited to structures, equipment, safety, security, drainage and seepage.

h. Reporting Requirements. **The Contractor shall maintain a daily written record of all disposal site operations.** This requirement shall be made a part of the Contractor’s Quality Control Plan and each record shall be included in the Contractor’s Quality Control Report.

i. Containment Structure Restoration. The Contractor shall restore any feature of any containment structures as required to prevent the escape of dredged material from the disposal site on to adjacent areas.

j. Control of Disposal Area Effluent. The contractor shall monitor and control disposal area conditions and disposal

effluent quality as prescribed in these specifications. The Contractor's Quality control Plan shall identify monitoring requirements and measures which will be taken to control disposal area conditions to insure effluent quality meets the requirements identified in the Water Quality Certificates (Section 00900).

k. New York State Water Quality Certifications. The contractor shall comply with all requirements identified in the NYSDEC Water Quality Certificate (WQC) including all special conditions. A copy of the WQC is included in Section 00900 J, Attachment E of this specification.

l. Removal of Containment Area Structures. Any structures (i.e., weirs, pipeline, etc.) installed by the Contractor for use in his disposal operations shall be removed and the contractor shall repair and stabilize all areas affected by the removal of these structures as approved by the Contracting Officer.

m. The contractor shall obtain grab samples of the placed fill from: the beach backshore; edge of berm; mean high water (MHW); and mean low water (MLW). One set of samples shall be taken every 200 feet along the placed fill area. A grain size analysis of each sand sample will be made using sieve sizes comparable to the Wentworth size classifications (shown in Section 00900 attachment J) and the results plotted on an appropriate curve format. The laboratory analysis results and plotted grain size distribution curves shall be furnished with the Daily Construction Quality Reports.

9. OVERDEPTH AND SIDE SLOPES:

9.1 Overdepth: To cover inaccuracies of the dredging process, material actually removed from within the specified area to be dredged, to a depth of not more than two (2) feet immediately below the required dredging area, will be calculated and paid for at the contract price.

9.2 Side and End Slopes: Material actually removed, within limits specified herein, to provide for final side slopes not flatter than 1 vertical on 5 horizontal, but not in excess of the amount originally lying above this limiting side slope will be calculated and paid for. Dredging in original position or by

dredging space below the pay slope plane at the bottom of the slope for upslope material capable of falling into the cut will be acceptable.

9.3 Excessive Dredging: (Basic Schedules A - Items 0001AB and 0003AB or Basic Schedule B Item 0004AB and 0006AB) Material taken from beyond the limits of the acceptance cross-sections plus allowable overdepth will be deducted from the total amount dredged as excessive dredging for which payment will not be made. Nothing herein shall be construed to prevent payment for removal of shoals performed in accordance with the applicable provisions of Section 00800 Special Provisions entitled: “FINAL EXAMINATION AND ACCEPTANCE” OR “SHOALING.”

10. LIMIT OF DREDGING: The area to be dredged is the area of the channel within the sections indicated on the drawings and specified in Section 00800 - Special Provision entitled: “FINAL EXAMINATION AND ACCEPTANCE,” as defined by the dredging prism indicated in Section Paragraph 9.2 and Section 001200 of the Technical Privision Section entitled: “OVERDEPTH AND SIDE SLOPES” and “MEASUREMENT AND PAYMENT.” Under no circumstances shall material be obtained from outside the limits of the 3 borrow areas. Should it be determined that an area outside the limits of the designated borrow areas were used for beach nourishment, the Contractor shall restore such area to the original condition.

11. REPORTING REQUIREMENTS: The Contractor shall prepare and maintain a Daily Report of Operations form and Quality Control Report form and furnish signed copies thereof to the Contracting Officer’s representative on a daily basis. Copies of the forms prescribed for recording the required information are attached (see Section 00900 - List of Documents, Exhibits and Other Attachments). Further instructions on the preparation and submittal of the reports will be furnished at the Preconstruction Conference.

11.1 DREDGE LOCATION CONTROL: (Option 1 of either Schedule A or B only)

The Contractor is required to have electronic positioning equipment that will accurately compute and plot the position of the dredge. Whenever dredging operations are underway, the location of the dredge shall be continuously monitored and the dredge location, in Long Island Lambert Coordinates, shall be recorded at intervals not to exceed one (1) minute . Such

records, and an accurate map showing actual dredging locations, shall be furnished to the Contracting Officer, or his representative daily as part of the Quality Control Reports. The electronic positioning equipment shall be installed on the dredge so as to monitor, as closely as possible, the actual location of the cutterhead or dragarm. This equipment shall be continuously accessible by the Government representative on board the dredge, who must be able to verify equipment calibration at any time. The electronic positioning equipment shall be required to becalibrated monthly, maintained and operated so that the maximum error for the coordinates recorded do not exceed 3 feet. The location on the dredge of the master antenna and the distance and direction from the master antenna to the cutterhead shall be reported on the Quality Control Reports. No dredging will take place outside the borrow area limits as shown on the drawings. Dredging outside of the borrow area limits will result in immediate shutdown of work. The Contractor's methods of location of the dredge shall be submitted with the quality control plan. Information to be submitted shall include a written description of the equipment, including applicable manufacturers brochure and data, and previous jobs on which the equipment has been used.

11.2 DREDGING DEPTH MONITORING EQUIPMENT (Schedule A or B - Item 0002AB or 0005AB only)

The Contractor shall have in continuous operation whenever dredging operations are underway, electronic equipment which measures the cutterhead depth. The depth measuring device (as approved by the Contracting Officer or Contracting Officer Representative) shall be used and interfaced with the electronic positioning equipment required in Paragraph 12. The depth measuring device shall be calibrated by a bar check daily. This equipment shall be accessible to the Government Representative onboard the dredge, who shall be able to verify calibration. Vertical accuracy shall be + or – 0.1 foot. Records required for dredge location (Paragraph 12) shall also include depth corrected for tide (elevation reference to MLW). Details of the depth measuring device shall be submitted with the quality control plan.

11.3 NOTIFICATION OF ON-SHORE BARGE OPERATION

A minimum of one hour's notice must be furnished by the

Contractor to the Contracting Officer, or his representative, and concurrently to the municipal or local agency responsible for beach operation prior to barge coming on shore between the hours of 9 A.M. and 7 P.M. Barges will not be allowed to come on shore in an area other than the immediate work area.

12. MEASUREMENT AND PAYMENT:

12.1 Mobilization and Demobilization (Basic Schedule A - Items 0001AA, 0002AA and 0003AA or Schedule B - Items 0004AA, 0005AA and 0006AA): See Section 01200, paragraph 1.a. entitled: “MOBILIZATION AND DEMOBILIZATION.”

12.2 Dredging of Shinnecock Inlet Channel and Moriches Inlet Channel: (Basic Schedules A – Items 0001AB and 0003AB or Schedule B - Item 0004AB and 0006AB) The total amount of material removed and paid for under the contract will be measured by the cubic yard in place. Measurement of the number of cubic yards in place will be made by computing the volume between the bottom surface shown by soundings of the last survey made before dredging and the bottom surface shown by soundings of a survey made as soon as practicable after the entire work specified has been completed. The volume for measurement shall include the material within the limits of the overdepth, side slopes described in Section 01200, paragraph entitled: “OVERDEPTH AND SIDE SLOPES,” less any deductions that may be required for misplaced material described in Section 01200, paragraph entitled: “Placement OF DREDGED MATERIAL.”

12.3 Dredging of Shinnecock Inlet Borrow Area: (Basic Schedule A – Item 0002AB or Schedule B -Item 0005AB) The total amount of material acceptably placed on the beach (0 – 4,000 feet west of the west jetty) is to be paid for at the contract price. Acceptable material will be measured by the cubic yard in place on the beach by computing the volume between beach surface shown by a survey made before filling and beach surface shown on a survey after filling. The beach will be accepted in 500 foot sections based on survey conducted at 100 foot increments. No payment will be made for material placed:

1) which violates Section (8) "Placement of Dredged Material." 2) beyond the point where the 1 on 15 slope line intersects the ocean. 3) outside the areas designated in the contract drawings with the exception of the areas

approved by the Corps of Engineers.

12.4 The hydrographic surveys of Shinnecock and Moriches Inlets found in the contract drawings (Section 00800 - Special Provision entitled: "CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS"), accurately represent conditions existing on February and April 2002. The soundings shown on the contract drawings were taken with a portable electronic depth recorder with a transducer frequency of 200 kHz. New soundings will be taken generally two weeks prior to dredging. Soundings after dredging will be made by an electronic depth recorder with a transducer frequency of 200 kHz. After-dredging surveys will be completed generally within five days of completion of a section or the project by an electronic depth recorder with a transducer frequency of 200 kHz. Determination of quantities removed to determine in-place quantities to be paid in the area specified, after having once made, will not be reopened, except on evidence of collusion, fraud, or obvious error. Computations for payment purposes will generally be made by the Corps of Engineers and utilizing the Triangulated Irregular Network (TIN) method or Average End Area method.

12.5 Shoaling in the areas to be dredged is not at a rapid rate from existing depths. The unit price for dredging based on the above method of computation of the quantity for which payment is to be made shall include the Contractor's evaluation of shoaling, changes in the regimen of the waterway, or changes caused by the Contractor's operations that may occur during the period between the survey before dredging and the survey for acceptance of the work.

12.6 Scows and Hopper Dredges: Where scows or hopper dredges are used in performance of work and where the Contractor maintains load or measuring devices on such scows or hopper dredges, copies of all recorded measurements made in connection with the work shall be furnished to the Contracting Officer and/or his Representative. If as the work progresses the Contractor determines that a significant difference exists between the recorded bin or scow quantities and the survey quantities computed from the check surveys described in Section 00800, paragraph 12.6 below, he shall immediately notify the Contracting Officer and/or his Representative of any such discrepancies. Such notification shall include a description of the Contractor's methods of measuring scow or bin quantities, certification of measuring techniques, documentation of material sampling and methods used to convert bin or scow measurements to

in-place density.

It is emphasized that bin or scow measurements shall not be used as a basis for partial or final payment.

12.7 Beach Grass Planting: (Basic Schedule A – Item 0002AC or Schedule B - Item 0005AC) The total amount of beach grass planted on the reconstructed dunes will be paid and measured for on a square yard basis.

12.8 Creation of Environmental Pools: (Basic Schedule A – Item 0002AD or Schedule B - Item 0005AD) The creation of the environmental features will be paid for on a lump sum basis.

12.9 Construct Sand Fencing: (Basic Schedule A – Item 0002AE or Schedule B - Item 0005AE) The total amount of sand fencing erected will be paid for a linear foot basis.

12.10 Monthly Partial Payments will be based on approximate quantities determined by soundings or sweepings taken behind the dredge by the Contractor along with the Government Inspector accompanying the survey party. The contractor's soundings are to be used for partial payments only and will not form a basis for the acceptance of the work (see Section 00800 - Special Provision entitled: "QUANTITY SURVEYS").

12.11 The Contractor must inform the Government, in writing, within three calendar days of completing a section as specified below.

Each section will be examined and accepted in accordance with Section 00800 Special Provision entitled: "FINAL EXAMINATION AND ACCEPTANCE" within a fair and reasonable time. Once the Contracting Officer or his representative accepts a section, the Contractor will be relieved of all responsibility for said section.

13. BUOY REMOVAL: The Contractor shall notify the Coast Guard at least 15 days prior to the date desired for having buoys removed or relocated which interfere with dredging operations. Requests shall be made in writing to:

COMMANDER (OAN)
FIRST COAST GUARD DISTRICT
408 ATLANTIC AVENUE
BOSTON, MASS. 02110

or by telephoning (617) 223-8337.

14. TEMPORARY FENCES:

14.1 If land booster pumps are used, a temporary protective stock mesh wire fence shall be installed by the Contractor around the booster facility. This fence shall have either wood or steel posts of adequate size installed to the acceptance of the contracting office, and/or his representative, and the wire mesh shall conform to federal specification rr-f221 & int. Am-1, table ix, type ii, style 8, chicken fencing 6'-0" high, 4"x6" mesh, 14 ½ gage wire, design 2672-6 or approved substitute. The fence shall be removed by the Contractor at the completion of the work or whn directed by the contracting officer and/or his representative and all material used shall remain property of the contractor.

14.2 Beach access ramps and stairs to the work areas will be closed by the contractor by erection of a wire mesh snow fence. These features will be identified during the on-site pre-construction meeting between the corps of engineers, the contractor and local interests.

14.3 The ends of each work area shall be closed off during work in that area by erection of a sand fence extending from dune road seaward to the mean high water line. No separate payment shall be made for the temporary fencing.

14.4 All costs associated with the fence shall be included in the contract unit prices.